

AMENDMENTS TO THE CLAIMS

Upon entry of the present amendment, the status of the claims will be as is shown below. This listing of claims replaces all previous versions and listings of claims in the present application.

Listing of Claims:

1-2. (Cancelled)

3. (Currently Amended) A display device, comprising:

first electrodes classified into a plurality of groups;

second electrodes respectively provided so as to cross said first electrodes;

a display panel having a plurality of capacitive light emitting elements respectively provided at intersections of said first electrodes and said second electrodes;
[[and]]

a drive circuit that applies a data pulse for light-emitting a selected capacitive light emitting element to the first electrodes in said plurality of groups such that phase differences respectively occur between said plurality of groups[[,]];

a number-of-times detector; and

a converter.

said drive circuit comprising:

a first power supply terminal that receives a first power supply voltage;

an inductive element;

a recovering capacitive element;

an application circuit that discharges charges from said recovering capacitive element by a resonance operation of a capacitance of said display panel and said inductive element to raise a potential at a first node, connects said first node and said first power supply terminal to each other, then disconnects said first node and said first power supply terminal from each other, and recovers charges in said recovering capacitive element from said first node through said inductive element by said resonance operation to lower the potential at said first node, to apply to said first node a driving pulse for applying a data pulse to the first electrodes in said plurality of groups; [[and]]

a potential limiting circuit that limits a quantity of charges recovered in said recovering capacitive element, to limit a potential of said recovering capacitive element so as not to exceed a predetermined value lower than said first power supply voltage; and

a controller,

said converter converting, in order to divide one field into a plurality of sub-fields and discharge said capacitive light emitting element selected for each of the sub-fields to perform gray scale expression, image data corresponding to the one field into image data corresponding to the sub-field,

said number-of-times detector detecting one of a number of times of rise and a number of times of fall of the data pulse applied to said first electrodes for each of the sub-fields on the basis of the image data fed from said converter, and

said controller calculating a ratio of said number of times obtained by said number-of-times detector to one of a maximum number of times the data pulse can rise

and a maximum number of times the data pulse can fall in each of the sub-fields, lowering, when said ratio is more than a predetermined ratio value, the potential at said first node to a predetermined voltage value, and then controlling an operation of said application circuit such that said first node is grounded.

4-17. (Cancelled)

18. (Currently Amended) The display device according to claim [[16]] 3, wherein said predetermined ratio value is not less than 95 %.

19. (Currently Amended) A method of driving a display device comprising first electrodes classified into a plurality of groups, second electrodes respectively provided so as to cross [[said]] the first electrodes, and a display panel comprising a plurality of capacitive light emitting elements respectively provided at intersections of [[said]] the first electrodes and [[said]] the second electrodes, comprising:

respectively applying a data pulse for light-emitting a selected capacitive light emitting element to the first electrodes in [[said]] the plurality of groups such that phase differences respectively occur between [[said]] the plurality of groups,

applying the data pulse comprising:

discharging charges from a recovering capacitive element by a resonance operation of a capacitance of [[said]] the display panel and an inductive element to raise a potential at a first node, connecting [[said]] the first node and a first power supply terminal to each other, then disconnecting [[said]] the first node and [[said]] the first power supply terminal from each other, and recovering the charges in [[said]] the

recovering capacitive element from [[said]] the first node through [[said]] the inductive element by [[said]] the resonance operation to lower the potential at [[said]] the first node, to apply to [[said]] the first node a driving pulse for applying a data pulse to the first electrodes in [[said]] the plurality of groups[,,]; and

limiting the quantity of charges recovered in [[said]] the recovering capacitive element, to limit a potential of [[said]] the recovering capacitive element so as not to exceed a predetermined value lower than a first power supply voltage,

said method further comprising:

converting, in order to divide one field into a plurality of sub-fields and discharge the capacitive light emitting element selected for each of the sub-fields to perform gray scale expression, image data corresponding to the one field into image data corresponding to the sub-field;

detecting one of a number of times of rise and a number of times of fall of the data pulse applied to the first electrodes for each of the sub-fields on the basis of the converted image data; and

calculating a ratio of the number of times detected to one of a maximum number of times the data pulse can rise and the maximum number of times the data pulse can fall in each of the sub-fields, lowering, when the ratio is more than a predetermined ratio value, the potential at the first node to a predetermined voltage value, and then grounding the first node.

20-22. (Cancelled)